

CONTROVERSY

ON THE

ARTIFICIAL TYMPANUM.

REPRINTED FROM "THE MEDICAL TIMES AND GAZETTE."

WITH ADDITIONS.

BY

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All sensible and sagacious men have long ago given up the idea of limiting human audacity and human imbecility—and the extent to which men will exaggerate evidence and will annihilate evidence,—will be satisfied without proof and will resist the most palpable proof. All this department of human nature is unfathomable, and therefore the issues and fruits of it are incalculable. But presumption is also a very old phenomenon, and a very familiar one, many people exhibit this feature almost to the extent of insanity. There is hardly a limit to the defiance which one man individually, standing on his own two legs *and without any other support*, will hurl at the unanimous conclusions of the whole human race, from Adam down to the present hour.—‘Times’ Leader, Jan. 5, 1858.

P R E F A C E.

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IT may be said that I am not consulting the dignity of my Profession in giving additional currency to the following controversy. In the words of my adversary, at page 22, I reply, that “I consult and advance the honour and dignity of my Profession by using every means which shall best serve to advance what is high and right, and put a stop to what is low and wrong ;” but if this excuse be not admitted, then I say that the time has arrived when it becomes my duty, as a pioneer of progress in my Art, to notice the efforts of a contemporary to decry and undermine the valuable additions which of late years have been made to the therapeutics of Aural Surgery in this country, chiefly through my instrumentality. So long as the name of Toynbee was unknown, his attacks were unworthy of comment ; but now that, by dint of advertising, by interminable *lectures* (so called), by false theories addressed to scientific societies,

by numberless dissections,* and though last not least, by raising a querulous or *pretended* opposition to existing and well-recognised modes of treatment, he has acquired some degree of notoriety, it will be worth while, *perhaps amusing*, to inquire into the truth of his theories† and the force of his arguments (?) ; and then possibly my readers will have no difficulty in finding an individual to whom the motto prefixed to this pamphlet will apply.

Let it not be supposed that the recent controversy is reprinted to parade my triumph over an adversary ; I have no inclination, nor is there any reason to write with such an object. I have achieved success—unexampled in my specialty—and I have won its reward—*independence*—sufficient for my moderate wants. No ! I am actuated by a higher motive—the cause of Science

* Mr Toynbee draws certain statistical results from the dissection of more than 1,500 ears. In reference to this extraordinary statement, I would ask a few questions :

1. How much time would be occupied by any experienced anatomist in the dissection of an ear with the nicety required to demonstrate a pathological fact ?
2. How many dead bodies have the eyes of any Demonstrator of Anatomy, at the largest school in London, looked upon in a period of thirteen years, that being the time Mr Toynbee had been in practice when he made the above statement ?
3. How many *deaf* people die in England in a period of thirteen years ?
4. How many of these are likely to come within the range of Mr Toynbee's observation ?

† “No one can consider Mr Toynbee's “Researches” as promoting aural pathology in any way ; on the contrary they have led their author to pathological views, the erroneous character of which is unfortunately to exert a very mischievous influence on the medical treatment of diseases of the ear.”—Dr Kramer, in the ‘Med. Times and Gazette,’ Oct. 16, 1852.

and a sense of duty to my Profession and my professional brethren. Not one word, more than may be necessary in explanation, shall be added to the reprinted controversy. Out of his own mouth will I prove Mr Toynbee's delinquencies, and if it is seen that the tactics of this *soi-disant* lecturer on Aural Surgery have been to foist himself into practice by succumbing to the prejudices of patients against operative proceedings which are sanctioned by every living surgical authority, and by other unworthy means, and that he has thus placed himself on a level with *extra-professional* quacks, he has himself to thank for the exposure.

The *casus belli* between Mr Toynbee and myself may be explained in a few words. In 1848 I made known (see 'Lancet,' July, 1848) a new principle of treatment for cases of deafness associated with perforate membrana tympani, and the material used was, and still is, cotton-wool. In 1850, at the annual meeting of the Provincial Medical Association, Mr Toynbee brought forward the same principle of treatment, with a difference in the material to be employed, without the slightest reference to what had been previously done by myself. Fully assured that the substitute he had proposed would not stand its ground, I allowed this gross piracy to pass unnoticed, until, in 1853, Mr Toynbee, presuming on my silence, surreptitiously obtained a medal from the Society of Arts for his so-called invention. Then it was that I remonstrated at the injustice which had been done me, but failed in drawing from Mr Toynbee a recognition of my claims to priority in the discovery; whilst, by publishing

a pamphlet on the subject, by procuring a paper to be inserted in ‘Chambers’s Journal,’ and by resorting to all sorts of schemes to obtain publicity, Mr Toynbee has actually been able to keep his vulcanised india-rubber membrane in competition with that which every medical man but himself admits to be infinitely preferable—namely, cotton-wool. Latterly, however, professional opinion has been so strongly expressed, not only in this country, but on the Continent, in favour of the cotton ; whilst the substitute of vulcanised membrane has been so generally condemned, that the following “Supplementary Lecture” seemed necessary to raise its declining fortunes. With what success this effort is likely to be attended, let the reader judge from the testimony appended.

15 Savile row, Jan. 1857.

CONTROVERSY,

dc. dc.

SUPPLEMENTARY LECTURE BY JOSEPH TOYNBEE, ESQ.

(Medical Times and Gazette, No. 368, Nov. 21, 1857.)

I AM not satisfied that in my Lecture on the Artificial Membrana Tympani, published in the 'Medical Times and Gazette' of April 25, I have done justice to Mr Yearsley's treatment of perforate membrana tympani by the use of cotton wool. I will, therefore, try to place the subject in its just light.

In the year 1838 Mr Yearsley published a pamphlet, entitled "On a new Mode of Treating Deafness when attended by partial or entire loss of the Membrana Tympani, associated or not with Discharge from the Ear." This was copied from papers in the 'Lancet,' and here are the concise facts. Having found a patient with perforate membrana tympani greatly improved by the introduction into the orifice of a spill of wet paper, Mr Yearsley ingeniously suggests the insertion of a piece of cotton wool into the orifice, in all cases of perforate membrana tympani. *So far, undoubted credit was due to Mr Yearsley;* for although Itard, Deleau, and Tod had spoken of the benefit derived from the use of foreign substances in similar cases, they did not urge the universal application of them. Tod, however, went so far as to use these words: He describes "The relief derived from the mere introduction of a little lint into the external meatus in those cases where the membrana tympani has been ruptured or destroyed by disease. So great, indeed, is the improvement which takes place from the appli-

cation of this simple remedy, that patients appear astonished on being so easily relieved."—"Anatomy and Physiology of the Organ of Hearing," pp. 105, 106; 1832.

I will now quote Mr Yearsley's words. They are: "A small piece of wool, differing in size according to the case, and fully moistened in water, is introduced through the speculum to the bottom of the meatus, and adjusted superiorly, inferiorly, anteriorly, or posteriorly, according to the situation of the perforation and other circumstances (what are they?) connected with the case, *but care must be taken that the entire opening be not covered*, otherwise the experiment will not succeed." Mr Yearsley also says: "It is far from my wish to discourage the attempts of others to place aright these magical bits of wool, but truth compels me to add, that, simple as it may appear, it is an operation requiring the most delicate hand to manipulate with success, which great experience only can confer." In the year 1852 Mr Yearsley announced the opinion that the way in which this cotton wool did good was "to support the remaining portion of the membrana tympani or the ossicula."

With a knowledge of these facts I started upon my own investigations, and although some of the statements were calculated to lead me directly away from the conclusions I subsequently arrived at in promulgating the theory of the functions of the membrana tympani and the insertion of an artificial one, still *I have not the slightest hesitation in saying that Mr Yearsley's statements*,—for I believe I had not then seen Mr Tod's—*were most valuable and suggestive to me*; indeed, although my mind was constantly alive to the subject, it is of course possible that *but for Mr Yearsley's paper, I might not have invented the artificial drum*.

And now that I have done what I truthfully believe to be full justice to Mr Yearsley, as the subject of the artificial membrana tympani is one of great interest to the Profession and the public, and is being brought under discussion in this country and on the continent, I will state fully my latest views on the subject.

I have already shown from his own words, some of which I again quote, that Mr Yearsley's discovery was this: that in cases of perforate membrana tympani great benefit is derived by passing down a portion of moistened cotton wool, and adjusting it "superiorly, inferiorly, anteriorly, and posteriorly, according to the situation of the perforation and other circumstances connected with the case: but care must be taken that the entire opening be *not* covered, otherwise the experiment will not succeed." Mr Yearsley adds, that "to place aright

these magical bits of wool is an operation requiring the most delicate tact to manipulate with success, which great experience only can confer." With regard to the manner in which the cotton wool does good, Mr Yearsley says, "It will be expected that I should say something of the *modus operandi* of the new application; but I can offer nothing that is conclusive." . . .

. . . "Is it possible that moist wool placed at the extremity of the passage can transmit the vibrations of sound in the same manner as the natural membrane, or must we look for some other explanation?" That "other explanation" Mr Yearsley advanced in 1852: it was that the use of the cotton wool was "to support the remaining portion of the membrana tympani or ossicula."—'Provincial Med. and Surg. Journal,' Aug. 18, 1852.

But to proceed. Armed with this one, but that one an important fact, that deafness caused by a perforation of the membrana tympani is diminished by passing down to the orifice a portion of moist cotton wool, I commenced my researches on the subject. The first result was the paper, "On the Structure of the Membrana Tympani in the Human Ear," published in the 'Philosophical Transactions,' for the year 1851; secondly, a paper read before the Royal Society, "On the Muscles which open the Eustachian Tube;" and thirdly, "A Paper on the Functions of the Ossicles of the Tympanum," read before the Royal Society, and published in the 'Medico-Chirurgical Review.' The anatomical and physiological results to which the papers lead were :

1. That the membrana tympani is not muscular, but it is composed of two distinct layers of fibrous tissue, having the dermis on their outside, and the mucous membrane on their inside.

2. That the principal functions of this membrana tympani were—

a. To form part of the resonant walls of the tympanic cavity, whereby the sonorous undulations are thrown upon the membrana fenestra rotundæ.

b. To act as the analogue of the iris in the eye, and defend the ear against too violent sonorous vibrations; and also, on the other hand, to place it in a position to receive and appreciate those most faint and delicate.

3. That the Eustachian tube is always closed except during the momentary act of swallowing saliva.

4. That the sonorous undulations, instead of passing through the chain of ossicles to the labyrinth, as is commonly believed, are conducted from the membrana tympani to the

air in the *closed* tympanum, and thereby impinge upon the membrane or the fenestra rotunda.

Now, it can well be conceived that, after these results had been attained, there was not much difficulty in arriving at the conviction, that in cases of perforate membrana tympani, the sonorous undulations must escape into the external meatus, and by commingling with those still entering, they would not only impinge too faintly on the membrane of the fenestra rotunda, for the perception through the nervous labyrinth of the more delicate sounds, but distinct hearing would be rendered impossible by the commingling and jarring of the tympanic vibrations with those advancing from the meatus.

It can easily be conceived, too, that after arriving at the above conclusions, no obstacle remained in my way towards the suggestion and adoption of the artificial membrana tympani, its main use being turned to the confinement and concentration of the vibrations. But here, again, I must guard myself from being in any way otherwise than rigidly truthful, by saying that it is impossible for me to assert how far these theoretical opinions were antecedent, coincident, or subsequent to the experiments with the artificial membrane. Some of my experiments were, I doubt not, in the scientific sense, purely empirical, that is, *made in imitation and variation of the cotton wool treatment without the promptings of any theory.*

And now I have to this subject but one more duty remaining. If my theoretical opinions and practical results are of any worth—and that the practical results are valuable, hundreds of patients and a very large number of medical men can testify,—there cannot be any grounds whatever for Mr Yearsley's assertion, that “care must be taken that the entire opening (in the drum) be not covered, otherwise the experiment will not succeed.” I oppose this view—firstly, because it is a false one, and false it can be proved by every medical man and student who has attended my practice at St Mary's Hospital, and by foreigners from most countries who have seen me apply the artificial drum or cotton wool. I may name especially my talented and experienced friend, Mr Hinton, who for some years has sedulously studied with and often helped me at St Mary's Hospital and elsewhere; Dr Sapolini, of Turin, and Kolliker's friend, Von Troelsch, of Wurzburg. I particularise these three gentlemen, because by their researches they have, in a measure, made the subject of ear diseases their own; but ask any medical man if, in apply-

ing the cotton wool or artificial drum, he has or has not found it *requisite* to keep an orifice in it. The answer will, I am confident, be in the negative ; but should it be otherwise, I am equally prepared to prove the utter groundlessness of the proceeding. Supposing an orifice to be preserved in using the wool or artificial membrane (and mind that in many many cases a *small* orifice which allows only a few of the undulations to escape is comparatively unimportant, *if the nervous apparatus is sound*), that orifice in the great majority of cases must be closed in an hour or so by the discharge welling through it, but no bad result follows.

I oppose this view, *secondly*, because any medical man reading it and the other detailed directions of Mr Yearsley—and he may be far away in a remote corner of the world—will be led to imagine that the difficulties of the application of the cotton wool or artificial membrana tympani are so great that it is hopeless for him to try the experiment upon his poor deaf patient, who consequently may remain deaf for life. I wish to make it understood that there are not many difficulties in applying the cotton or artificial membrane to an ordinary case, so that every medical man who has once diagnosed his case correctly may try to operate, indeed when he is told that Mr Yearsley has now taken measures to advertise to the general public and sell the cotton wool and a silver tube (under the name of artificial tympanum) to the deaf public for their own use, a medical man need no longer be afraid of operating with it in spite of the formidable array of precise directions given by Mr Yearsley.

If Mr Yearsley is unconvinced still, let him bring some of his patients, and I will bring mine, before the Pathological Society, and we will experiment conjointly, for say what people may, Truth is after all easily reached by those who are really desirous to possess her.

In conclusion, I think it requisite to say a few words on the comparative value of the cotton wool and the artificial membrana tympani. No experienced hand can deny that the moistened cotton wool does, in a great majority of cases of deafness dependent upon perforate membrana tympani, act in restoring the hearing. The *modus operandi* is obvious ; the water in the interstices of the cotton fibre acts as the successful air bubble did in my own patients, by receiving the sonorous vibrations, conducting them to the air in the tympanic cavity, and confining them there, for concentration on the membrana fenestræ rotundæ. But the defects of this cotton wool must not be overlooked ; it is liable to induce inflammation, and it soon becomes sodden by discharge, and forms a

heavy mass which presses unduly upon the remaining part of the drum, so as to push it inward to the inner wall of the tympanum ; or if the whole of the membrane is absent, then the cotton wool is liable to press against the stapes and inner wall of the tympanum. Again, its constant pressure against the walls of the meatus is calculated to cause absorption of these walls ; in short, when we know that one of the functions of the membrana tympani is to form part of the sonorous walls of the tympanic cavity this cotton wool must be looked upon, to say the least of it, as an unwieldy substitute. The artificial drum is made of very thin vulcanised india-rubber, not gutta percha ; some of it is nearly as thin as the paper on which these lines are penned ; it is soft, so that its passage along the meatus does not cause pain ; it is elastic, so that by the pressure of its margin against the walls of the meatus it is retained in its position, although it still allows the discharge to exude by its side ; it is resilient and firm, so as to reflect the sonorous undulations : its defect is, that when so thin it is apt to be torn away from the silver wire on which it is rivetted.

MR YEARSLEY'S REPLY.

(Medical Times and Gazette, No. 388, page 575.)

As time wears on, the discovery of the wetted cotton—or artificial tympanum, by which name it is now known—cannot fail to engage more and more the attention of philosophic minds. The fact of a fellow-creature, known to have been deaf from infancy, and from a supposed incurable condition, namely, “loss of the drum of the ear,” suddenly walking forth among his friends hearing like themselves — whilst presenting a living memorial of the success of the treatment—offers a phenomenon which cannot fail to strike the beholders with surprise and astonishment. Then to find that this apparently miraculous relief is produced by the most simple means, adds to the interest created by such a triumph of art.

Having originated this method of treatment, it cannot but be gratifying to me to see the subject followed up, and testimony borne to its merits by my contemporaries ; and although differences may arise as to the theory of the treatment, and even as to the material to be employed, I may congratulate myself on having a collaborator so industrious and persevering as Mr Toynbee.

I accept, therefore, with thanks the instalment of justice which has been tendered to me by that gentleman in his supplementary lecture, published in the ‘Medical Times and

Gazette' of November 21st, No. 386. Had his recognition of my claims to an important discovery, and his obligations to that discovery with reference to his own appliance, been made at an earlier period, neither his friends nor mine would have held him in less estimation for his candour and liberality, whilst much unpleasant feeling would have been saved between those who, though competitors in the race for fame, need not and ought not to be enemies. I have said an "instalment of justice," because until Mr Toynbee embodies in his pamphlet on the Artificial Membrana Tympani, in his paper published in the Transactions of the Royal Society, and in his paper * read before the Medical and Chirurgical Society, the pre-existence of a similar mode of treatment, having similar objects, and until he places at the disposal of the Council of the Society of Arts a certain medal awarded to him for a discovery made by another, he cannot be fairly said to be free from the imputation of disingenuous conduct towards me. The readers of the papers adverted to could never suppose that the Artificial Membrana Tympani is a mere substitute for another substance which had been proposed, and for years previously successfully adopted by one of the writer's contemporaries; but such is the fact, as is now by the force of circumstances admitted by Mr Toynbee. Ambitious of a niche in the Temple of Fame, and firm in the conviction that the day will come when the importance of my discovery will be recognised beyond the circle of my patients, and rank with the greatest of the age, I can lay my hand on my heart, and solemnly declare that I have dealt with it from the first in all honesty, and without the slightest reservation. I have never made the slightest secret of the remedy; at the fitting moment, that is, when its value had been fully tested, I divulged it to the Profession, and my doors have been ever open to my brethren to witness the practical illustration of the fact. Finally, I beg to assure Mr Toynbee, who alone has insinuated the contrary, that at the time I published my papers in the 'Lancet,' in July 1848, I was not aware that any confirmation of my views existed in the works of Itard, Deleau, or Tod; and in searching for, finding, and *myself calling attention to such confirmation*, in the works of the two first-named authors, I little thought that any contemporary would be found so ungenerous as to take advantage of the information given him, to question the originality of my idea, and the treatment founded thereon.

The remarkable passage from the work of Mr Tod* came to

* Mr Tod was a surgeon practising at 5 Upper Fitzroy street, Fitzroy square, and died about twelve months ago.

light years afterwards; and it is astounding that he did not take advantage of so important a fact, but that neither he, nor Itard, nor Deleau, adopted it in practice is most certain—whilst from Mr Tod I actually received congratulations on the valuable discovery I had made.

Having thus cleared away the personalities of the subject, I now come to the respective merits of the original method of the wetted cotton, the substitute proposed by Mr Toynbee, and the theories advanced by each of us in explanation of the *modus operandi* of the treatment.

Thus stands the case :—

1. I claim to have discovered a new principle of treatment applicable to cases of deafness, attended by perforation of the membrana tympani. Whatever be the material employed, whether it be cotton wool, sheep's wool, sponge, gutta percha membrane, vulcanised india-rubber membrane, a piece of bacon-fat, a piece of stick, or a piece of whipcord, each of which has been found more or less successful; this claim cannot be invalidated.

2. I claim for moistened cotton wool a superiority over all other substances, as the best material to be used, for the following reasons :—1. It is more easily applied. 2. It is simple, safe, and cleanly. 3. It retains its proper position longer. 4. It causes no irritation, but, on the contrary, a feeling of comfort. 5. It produces no noises in the ear in the acts of eating or talking. 6. It *cures* the discharge of the ear which generally attends loss of the membrana tympani. 7. It produces the highest degree of hearing of which a patient with perforated membrana tympani is susceptible. With respect to the substitute of Mr Toynbee, I speak more upon the evidence of patients than my own, for I confess to have little experience of its use, common sense having raised up in my mind insuperable objections to its adoption. Upon that evidence I affirm—1. It is *not* easily applied. 2. It is rude in its construction, rough when applied to the sensitive walls of the meatus, and unbearable in the great majority of cases to the patient. Of this Mr Toynbee must be well aware, when he recommended that at first it should be only worn for half an hour at a time. 3. It is constantly falling out of its place. 4. It is a frequent source of irritation and annoyance to the patient, to which very few will submit. 5. It produces noises in the ear on any movement of the jaw, such as in eating or talking, which is a great source of complaint. 6. It keeps up, instead of *curing*, the discharge which attends upon cases of perforated membrana tympani. 7. Whilst all these objections obtain, I am prepared to con-

cede that it is as capable of producing the desired effect as the wetted cotton or any other material.

3. I maintain that to be successful, the orifice in the membrana tympani must neither be filled in nor completely covered by the cotton, and that an opening must be left along the walls of the meatus, down to the site of the membrana tympani. The only author who has written upon this question is Mr Pilcher, and here is his opinion :—“In my experience, the more complete closure of an aperture in the ulcerated membrane by Mr Toynbee’s artificial membrane has not been attended with such useful results as the imperfect closure by the wetted cotton introduced by Mr Yearsley.” (‘On the Physiology of the Tympanum,’ page 28.)—It is frequently very difficult to demonstrate the fact of incomplete closure of the perforation after the cotton is put in its proper position, though in almost every case you can, by the aid of the speculum, see that the remaining membrane is not covered ; but I submit that the facts advanced in another part of this paper, added to the testimony of patients, are amply sufficient to prove that a closed cavity is not a *sine quâ non* for success.

4. I believe that the theory of the *modus operandi* is as follows :—The partial loss of the membrana tympani deprives the ossicula of their natural support and tension ; the cotton wool is so adjusted against the remaining portion of membrane as to afford the necessary support to the ossicula ; and then the waves of sound break upon the cotton, cause the membrane and chain of bones to vibrate, through which the impulse is conveyed onwards to the fenestræ, to the expansion of the auditory nerve in the labyrinth, and finally to the brain. I will mention one fact in support of the non-closure theory. Many a time and oft have I, in my attempts to find the desired spot on which to place the cotton, produced the improved hearing only so long as the point of my probe was in contact with the ruptured membrane. The probe being withdrawn, the effect ceased. Now Mr Toynbee will not venture to assert that in this manipulation I produced a closure of the cavity. I am very much inclined to think, and it is worthy of experiment, that Mr Toynbee’s patients would find his instrument as effectual *minus* the vulcanised membrane.

5. Any substance will produce the desired effect if applied so as to support the remaining portion of the membrane or the ossicula, but cotton wool is the best, for the reasons already assigned.

Of Mr Toynbee’s want of precision in quoting my pub-

lished opinions and in stating facts, I have before had occasion to complain. In the supplementary lecture which calls forth this reply, I am sorry to see he has again committed himself in both these respects, as I shall now show. He commences by saying that, "In the year 1838, Mr Yearsley published a pamphlet entitled," &c. It may be a typographical error, but it should have been 1848. Then he goes on to say:—"Having found a patient with perforate membrana tympani greatly improved by the introduction *into the orifice* of a spill of wet paper, Mr Yearsley ingeniously suggests the insertion of a piece of cotton wool *into the orifice* in all cases of perforate membrana tympani." Now, this absence of precision in stating a fact is the more remarkable, for, in the very next paragraph Mr Toynbee quotes from my pamphlet the following sentence, which truly expresses what is necessary to be done, and that the very opposite of what the lecturer had just stated:—"A small piece of wool, differing in size according to the case, and fully moistened in water, is introduced through the speculum to the bottom of the meatus, and adjusted superiorly, inferiorly, anteriorly, or posteriorly, according to the situation of the perforation, and other circumstances connected with the case; but *care must be taken* that the *entire opening be not covered*, otherwise the experiment will not succeed."

In the next paragraph we have admissions which should have been made years ago—namely, Mr Toynbee "has not the slightest hesitation in saying that Mr Yearsley's statements (for he *believes* he had not then seen Mr Tod's), were most valuable and suggestive to him; and it is of course *possible* that, but for Mr Yearsley's paper, he might not have invented the artificial drum!" Why this tardy admission? Can it be that Mr Toynbee is painfully aware that the cotton wool remedy is universally in the ascendant, whilst the substitute of vulcanised membrane is rapidly on the wane? Is it that by getting up a controversy on the subject he hopes to resuscitate its declining fortunes? It may do so for a while, but Mr Toynbee may take my word for it, that the career of the artificial membrana tympani will at the most be brief, whilst the cotton wool treatment will last for ever. For fifteen years its success has been tested and proved. For that long period I have patients who have never ceased to use it, and who experience the same inestimable advantage from it as they did on its first application.

My theory as to the *modus operandi* of the cotton-wool has been stated; now let us examine into the opposing theory of Mr Toynbee. He contends for a *closure* of the perforated

cavity of the tympanum as essential to success, whether by means of the wetted cotton, or its substitute of vulcanized membrane. He says that "in cases of perforate membrana tympani, the sonorous undulations must escape into the external meatus, and by commingling with those still entering, they would not only impinge too faintly on the membrane of the fenestra rotunda for the perception through the nervous labyrinth of the more delicate sounds, but distinct hearing would be rendered impossible by the commingling and jarring of the tympanic vibrations with those advancing from the meatus." To obviate this state of things, he was led to suggest and adopt the artificial membrana tympani, "its main use being turned to the confinement and concentration of the vibrations."

With respect to this ingenious theory, I have one observation to make, and I submit that it is alone sufficient for its subversion. Every patient with perforated drum has the sense of hearing to a greater or less extent; but whatever degree of sound passes onwards to the brain, passes in a natural state, though deficient in volume, but without any confusion from the commingling or jarring occasioned by antagonism of sounds going in and out of the meatus. Mr Toynbee, doubtless, like myself, has often met with patients who have complained of sounds in a certain key striking upon their ear, jarring, cracked and broken; but in these cases the membrana tympani has always been intact, or at least imperforate. I have never myself heard it complained of in the case of perforated membrane.

Mr Toynbee has quoted the names of gentlemen, who, he says, are converts to his views; but I cannot allow the testimony of Mr Toynbee's friends to be of any value when my remedy is in question, and Mr Toynbee the operator, because that gentleman, never having seen me manipulate, cannot be expected to introduce the remedy with that tact and ability necessary at all times for success. To this, indeed, I am disposed to attribute the discrepancies of opinion which we exhibit before the world.

It may be that we have neither of us yet arrived at the true explanation of the phenomena involved in the treatment; but I must be allowed to retain my conviction that the theory I have advanced is the true one, until some other more reasonable is proposed. It is no slight evidence of its correctness that every patient upon whom I manipulate, and whom I teach the mode of applying the cotton, falls into my view of the question. The testimony and experience of patients using the remedy must be considered as valuable, if not conclusive.

To aid in the solution of the question, therefore, I have addressed a note of inquiry to a few of my patients, and here append their replies.*

I cannot help being amused at the challenge now offered by Mr Toynbee to settle the points in dispute between us in a society of medical men, when it is remembered how he ignored a similar challenge emanating from myself, which appeared in the 'Medical Times and Gazette' so far back as June, 1857, page 576, in the following words:—"Not only with respect to this question of a closed or open cavity should unanimity prevail, but also as to the best material or appliance to be used. Of the preference to be given to the cotton-wool I am quite assured—others may differ with me. I am willing, therefore, and indeed desirous, to submit the matter to any competent tribunal of medical men or commission of inquiry, to decide these questions."

Mr Toynbee has favoured the readers of the 'Medical Times and Gazette' with *his* explanation of the *modus operandi* of the cotton-wool when successfully applied. He says:—"The water in the interstices of the cotton fibres acts as the successful air-bubble did in my own patients, by receiving the sonorous vibrations, conducting them to the air in the tympanic cavity, and confining them there for concentration on the membrana fenestræ rotundæ." On the contrary, I contend that one of the chief ends obtained by the presence of the cotton, is, firstly, to rupture the air-bubble (indicated to the patient by a distinct *click*, and which may be heard by a bystander); and, secondly, to prevent the re-formation of bubbles of air in the discharge in and around the perforated membrane. It was by breaking this bubble of air that my patient from New York effected temporary improvements in his hearing. It is by the same means that patients with perforated tympana can improve their hearing for a few minutes, and sometimes for a longer time, by forcing air up the Eustachian tube and through the perforated membrane. In short, this said bubble of air is another difficulty in the way of Mr Toynbee's theory of the closed cavity. I find in practice, that when in applying the cotton I produce a *click*, success is instantly attained.

Mr Toynbee would have it supposed that there are not many difficulties in applying the cotton or artificial tympanum to an ordinary case. Such has not been my experience, and I must still maintain that those patients will always fare best who have had the advantage of skilful and experienced teach-

* See page 30.

ing in a nice adjustment of the wetted cotton. In fact, I can conscientiously reiterate, that, "simple as it would appear, it is an operation requiring the most delicate tact to manipulate with success, which great experience only can confer."

That the subject may be well considered and discussed, I have arranged to resume my Practical Demonstrations at my residence on the first and third Wednesday in every month, commencing December 16th, at two o'clock, on which occasion it will give me pleasure to see Mr Toynbee, or any member of the Profession interested in the inquiry.

MR TOYNBEE'S REJOINDER.

(*Medical Times and Gazette*, No. 614, page 389.)

TO THE EDITOR OF THE 'MEDICAL TIMES AND GAZETTE.'

SIR,—The point at issue between Mr Yearsley and myself may be expressed in a few plain words.

1. Mr Yearsley in 1848 made the following discovery of a mode of healing perforata membrana tympani (the italics and words in brackets in the quotation are mine, and the reasons obvious):—"A small piece of wool, differing [how, we are not told] in size according to the case, and fully moistened in water, is introduced through the speculum to the bottom of the meatus, and adjusted *superiorly, inferiorly, anteriorly, or posteriorly*, according [how?] to the situation of the perforation and other circumstances [what they are we are not told] connected with the case; but care must be taken that the entire opening be not covered, otherwise the experiment will not succeed" [an egregious misstatement]. He adds, "It is far from my wish to discourage the attempts of others [why say a word about it, then?] to place aright these magical bits of wool, but truth compels me to add, that, simple as it may appear, it is an operation requiring the most *delicate tact* to manipulate with success, which *great experience* only can confer." To prove the value of the latter assertion Mr Yearsley is now selling a patented article under the name of the artificial tympanum!*—a piece of cotton-wool about the size of the last joint of the little finger, with a piece of thread fastened to it, and this is for patients themselves, with "most delicate tact," of course, to "adjust superiorly, inferiorly, anteriorly, and posteriorly, according to the situation of the perforation," leaving, of course, the indispensable hole! Surely the readers of the 'Vicar of Wakefield,' or of Carlyle, know the appropriate words to be used here.

* A slight mistake. Mr Yearsley's invention is sold by Mr Charles Greene.

To be quite plain, what do these directions mean? I will not pain Mr Yearsley by saying what they appear to his professional brethren to mean, but I will tell him that they do not mean what I mean (and I say it without fear of being thought to praise myself—far from it) when I publish my most minute and particular directions for the application of the artificial membrana tympani—“Medical men, in whatever part of the world you are, if you meet with this pamphlet or this lecture, you with due care, skill, and attention may apply the artificial drum, and relieve your patient, deaf from a perforate drum.”

2. With Mr Yearsley’s single fact before me I sent a paper to the Royal Society on the structure of the membrana tympani—it is published in the ‘Philosophical Transactions’ for 1851; a paper by me was read at the Royal Society, tending to show that the sonorous undulations do not pass through the chain of bones to the labyrinth, but through the air in the tympanum; another paper by me was also read at the Royal Society, showing that, contrary to all preconceived ideas, the Eustachian tube is closed, except during the momentary act of swallowing. Upon these papers and the fact of Mr Yearsley, I advance the view of the practicability of forming an artificial membrana tympani; a view never previously advanced; and why? it would simply have been laughed at, because it was supposed that the chain of bones conducted the vibrations. For how was the artificial drum to be fixed to the chain of bones, when, as a rule, the handle of the malleus had disappeared? and here it may be observed that the most absurd term “artificial tympanum” was never used by Mr Yearsley until I had invented the artificial membrana tympani. Well, in my paper *on the artificial membrana tympani, and in my lecture, I published all Mr Yearsley’s directions respecting the application of his cotton-wool discovery.* From the time of the publication of my paper to the present moment, my most intimate friends, or others who may not be my friends, and those who have written on the subject and read all about it, *never hinted, in public or in private, that I had not done full justice to Mr Yearsley.* The only hint was of an opposite kind, that of such a production as Mr Yearsley’s I ought to have taken no notice. Feeling that if I erred at all, I would err on the side of justice, I published my supplementary lecture on the artificial membrana tympani. Mr Yearsley calls it an instalment of justice. I uprightly declare it is more, fifty times more, than justice to Mr Yearsley and his *tympanum*.

The Society of Arts had, I believe, all the documents before them* when they awarded me their medal; if they had not,

* Yes, all Mr Toynbee’s, but not one of Mr Yearsley’s.

and if they are not satisfied with their award, I will at once replace the medal in their hands, together with Mr Yearsley's paper, a box of his patented tympanums, and my three Royal Society's papers, and my brochure; if they confer it on Mr Yearsley, I will promise to be at the expense of a new medal, or even pay for one of any other metal.

If the medal is awarded to Mr Yearsley, and I pay for it, I shall stipulate that on one side of it there be a portrait of the discoverer receiving five shillings and sixpence, the price of a box of tympanums just sold to a stone deaf old lady. The inscription to be as follows:—"Awarded to the erect figure on the opposite side, who seeing an American's deafness improved by having the orifice in his drum closed by a piece of wet paper, with a bold flash of inventive genius suggested in place of paper cotton-wool, and who by his profound knowledge of anatomy subsequently named his 'magical bits of wool'—*artificial tympanums*! Awarded, secondly, for the discovery that these magical tympanums must be placed 'superiorly, inferiorly, anteriorly, or posteriorly, according to circumstances,' which no one but their discoverer knows; awarded, thirdly, for the discovery and promulgation of the important fact in science, that although the *orifice* in the drum is closed by the magical tympanum, a *hole* nevertheless remains." On the margin of the medal, "Instalment of justice"—"Better late than never."

It suits Mr Yearsley's purpose to take every opportunity to couple his name with mine, by writing about me; but I am not one of those who think that it is well to allow an insinuation against a man's honour to be passed over. Honour is too noble and precious a boon to be permitted to be sneered away thus. Further, as a teacher of Aural Surgery, I will not hesitate to say, that I know the use of the cotton-wool is often attended with danger to the patient's life. If Mr Yearsley desires it, I will give him formally the name of a physician who consulted me with symptoms of inflammation of the dura-mater, from having the cotton-wool pushed into the meatus by Mr Yearsley's own hands.* Common sense should tell every man that a foreign body of the kind in question, especially when soaked with discharge, must act as an irritant at the bottom of the meatus, and with nothing to keep it out of the sensitive tympanic cavity, and that the difference between its pressure and that of the delicate border of vulcanized india-rubber of the artificial drum, which rests against the cartilaginous circle of the old organ, must at once be apparent.

* See page 28.

And now in conclusion, Sir, allow me to make a general statement bearing on the subject of Aural Surgery.

I confess that when I see Mr Yearsley's advertisement* of his patented Artificial Tympanum; when I see the advertisement of Mr Harvey's Ear Infirmary,† by a fellow of the College too, almost daily in the 'Times,' rivalling as near as he dare the advertisements of Drs Hoghton and Colston; when I see the tonsils of patients suffering from no other disease than debility of the nervous apparatus of the ear, recklessly excited;‡ when I find the Eustachian tubes injected by operation in every case of deafness, and to the great detriment of the patient, and that this totally indefensible proceeding is universal among Aural Surgeons in Paris and with one in Vienna, I confess I feel the subject of Aural Surgery, which I have laboured long and hard to uplift, is being ruthlessly dragged down; and I do not scruple to say that the evil must be met with the keenest weapons that human skill can devise. Thomas Hood felt that it was useless to argue in similar cases, and the following satirical lines in reference to the proceedings I have particularised are as applicable now as they were when he wrote them. His words, put into the mouth of a quack vendor of ear-trumpets, are racy, and to the point:—

" You may go to surgical chaps, if you choose,
Who will blow up your tubes like copper flues,
Or cut your tonsils right away
As you'd shell out your almonds for Christmas Day;
And after all a matter of doubt
Whether you ever would hear the shout
Of the little blackguards that bawl about,
' There you go with your tonsils out ! ' "

It may be said that I am not consulting the dignity of my profession in quoting these lines. I reply, that I consult and advance the dignity and honour of my profession by using every means within my reach which I think shall best serve to advance what is high and right, and put a stop to what is low and wrong. There are men to whom the pungent arrows of satire are absolutely requisite; they are dead to milder, more reasonable, more Christian-like warnings. To begin with Mr Yearsley. If "his hand upon his heart" means something, and he really wishes me to give him an opportunity of explaining publicly a well-authenticated circumstance or two

* It would be more correct to say "Mr Charles Greene's advertisement of Mr Yearsley's patented Artificial Tympanum."

† It would be more correct to say "the Secretary's advertisement of the Ear Infirmary to which Mr Harvey is Surgeon."

bearing upon his practice and the dignity of the Profession that have come to my knowledge, I hereby promise not to deny him. I am, &c., JOSEPH TOYNBEE.

Savile row, Dec. 8, 1857.

MR YEARSLEY'S REPLY.

(*Medical Times and Gazette*, No. 390, page 640.)

TO THE EDITOR OF THE 'MEDICAL TIMES AND GAZETTE.'

SIR,—Inasmuch as Mr Toynbee's letter, at p. 614 of your current number, is no reply to my arguments against the closed cavity theory, I should be quite justified in leaving it unnoticed, and should do so, were it not that in the cause of truth I have more to say on the subject.

This controversy (originated, be it observed, by Mr Toynbee) is not to be carried on by what he calls "pungent arrows of satire," neither should the columns of a respectable Medical journal nor the dignity of the Profession be compromised by acrimonious contention. I wish, therefore, Mr Toynbee to understand that I retire from the field, if the points at issue between us cannot be discussed in a calm and philosophic spirit. From necessity, though disinclined, I am on this occasion driven to answer Mr Toynbee's strange assertions, but I trust that all irrelevancy of observation in relation to our differences of opinion may be avoided for the future.

In my reply to his "instalment of justice," I advanced some arguments which appeared to me to be subversive of his closed cavity theory, but I seek in vain in his "Christian-like warning" for anything like a refutation, whilst my precaution against covering over the entire opening is flatly denounced as "an egregious misstatement." This is Mr Toynbee's method of bolstering up his untenable theory, though I opine it will not satisfy the readers of your journal. But I cannot allow him thus to escape me, and therefore I repeat—1. His theory is untenable, because I can produce all the improvement of hearing of which the patient is susceptible by maintaining the point of a probe on the magical spot, which probe certainly does not close up the perforated cavity. 2. It is untenable, because unless an opening by the side of the cotton be preserved down to the cavity of the tympanum, the good effect is never produced. 3. It is untenable, because patients almost always have the power of temporarily making themselves hear better by blowing through the perforation, *via* the Eustachian tube. 4. It is untenable, because when a bubble

of air forms in the discharge, success is attained only by the rupture of that bubble, which is distinctly audible to both operator and patient.

But I will interpose another difficulty in the way of Mr Toynbee's theory. Sir Astley Cooper performed hundreds of times the operation of perforation of the membrana tympani I say not one word in favour of his indiscriminate operating; but who can doubt that he sometimes succeeded?—and what was the intention of the procedure but to lay open a closed cavity? It has been my good fortune to discover the cases in which Sir Astley succeeded. They were those of patients only in whom perforation had once existed from disease, which perforation had cicatrised and healed over, deafening the patient, until the perforation of Sir Astley reopened the closed cavity. I have such an array of facts and cases in favour of this explanation of Sir Astley's successes and failures from observations and experiments in my own practice, as, when published, will leave no doubt whatever upon the subject.

Ever, in finding myself called upon to reply to Mr Toynbee I have had to complain of his errors in quoting me, or his unfair criticisms, or both. Such is the case in the present instance. The first paragraph of his letter runs thus—the words in italics are my running commentaries:—

“Mr Yearsley, in 1848, made the following discovery [*it should be ‘made known,’ or ‘published,’ for the discovery was ‘made’ six years previously, which time it took to mature it*] of a mode of healing perforate membrana tympani—*[it should be treating, not healing. If I had healed the perforation, I should have made a closed cavity, and deafened my patient.]* A small piece of wool, differing [how we are not told] in size according to the case—*[Yes, Mr T., you are told, ‘differing in size according to the case’]*,—and fully moistened in water, is introduced through the speculum to the bottom of the meatus, and adjusted superiorly, inferiorly, anteriorly, or posteriorly, according [how?] to the situation of the perforation and other circumstances [what they are we are not told] connected with the case—*[How? Mr Toynbee asks. Why, ‘according to the situation, etc,’ ‘the other circumstances’ being the calibre of the passage and its length]*,—but care must be taken that the entire opening be not covered, otherwise the experiment will not succeed.”
[An egregious misstatement.] I make no comment on this remark of Mr Toynbee. Mr Toynbee continues his quotations thus:—“It is far from my wish to discourage the

attempts of others [why say a word about it, then?] to place aright these magical bits of wool, but truth compels me to add that, simple as it may appear, it is an operation requiring the most delicate tact to manipulate with success, which great experience only can confer." [The interpolation of "*Why say a word about it, then?*" is answered, "*Because, 'simple as it may appear,' &c.*"]

With regard to the idea of patenting the artificial tympanum, Mr Toynbee should remember that it was his own unhandsome conduct, and the conduct of a Parisian quack, which led me to seek this mode of protection against improper and dangerous appliances, such as the artificial membrana tympani, by which a new and important principle of treatment was liable to be brought into disrepute. By-the-by, I must here correct another of Mr Toynbee's errors: the cost of the box of tympanums is 2s. 6d., and not, as stated by him, 5s. 6d.

Without fear of being thought to praise himself—far from it—Mr Toynbee publishes his most minute and particular directions for the application of the artificial membrana tympani. It is quite a relief to find myself for once in unison with him, and jointly therefore we say:—

"Medical men, in whatever part of the world you are, if you meet with this pamphlet or this lecture, you, with *due care, skill, and attention*, may apply the artificial drum, and relieve your patient, deaf from a perforate drum."

Due care, skill, and attention are undoubtedly required for success, in other words, "tact and experience."

While myself expecting justice from Mr Toynbee, I am always ready to accord it to him, and therefore I hasten to relieve him of the charge of bringing his substitute for the wetted cotton either before the Royal Society or the Medical and Chirurgical Society. In this it appears I have been misinformed, and I am glad to find that his boldness has not extended beyond the precincts of a non-medical institution, the Society of Arts, to exhibit, and seek reward for his piracy of another man's idea.

The term "artificial tympanum" was given to my invention by Dr Noggerath of Brussels,* by Mr Harvey, and constantly by patients, long before the invention of the substitute of Mr Toynbee; critically correct it may not be, but it is not "absurd." And at all events it is as appropriate as "artificial membrana tympani" is to the "toy."†

* See page 32.

† Tcynbee's Toy is the name given to that gentleman's substitute for the wetted cotton by the talented editor of the 'Medical Circular.'—See MED. CIR., vol. 3, pp. 2 and 21.

Mr Toynbee says, "It suits Mr Yearsley's purpose to take every opportunity to couple his name with mine, by writing about me." This "egregious misstatement" is easy of dis-proof. The present controversy originated with Mr Toynbee. The controversy on the treatment of enlarged tonsils originated with him,* and with an animus transparent on the title of his communication, for it ran thus:—"Ought the tonsils and uvula to be excised in the treatment of deafness?" instead of "Ought the *enlarged* tonsil or *elongated* uvula to be excised, etc.?" I beg to direct the attention of your readers to my reply to Mr Toynbee's ridiculous attack upon my practice in the 'Medical Times and Gazette' of May 28, 1853. But still further, to show how wide of the truth is his assertion, I may state, that in no publication of mine is Mr Toynbee's name mentioned; and why? Because I have always considered that he had forfeited all right to notice, since he had appropriated my idea of the artificial tympanum; and secondly, because I have yet to learn of one original idea which he has enunciated in practice. Of what avail are numberless (and incredible) dissections, of what use are theories, if they bring us no practical fruits?

There is another assertion of Mr Toynbee's left now to notice, namely, that a physician experienced symptoms of inflammation of the dura mater from the application of the wetted cotton. For the present I merely say the statement is untrue, and I will prove it.†

I can hardly think that the readers of your Journal will place Mr Toynbee on the pinnacle of orthodoxy which he arrogates to himself. His onslaught on all the aural Surgeons of London, Paris, and Vienna, is a piracy of the works of Hoghton and Colston, who demolish us in precisely similar language. Never was exhibited a better illustration of *intra professional* quackery. We must all abide by the judgment of our profession, and time will find us all out. But it should be known why Mr Harvey is dragged into the *mélée*. That gentleman, at the Medical Society of London, had the candour to give his opinion in favour of the artificial tympanum, which, like Mr Pilcher, he had found far more useful than the artificial membrana tympani of Mr Toynbee. *Hinc illæ lachrymæ!* His anathema against excision of enlarged tonsils, and against catheterism of the Eustachian tubes, only shows how slow some men are to adopt improvements when they do not originate with themselves. The first of these operations is universally practised by every operative Surgeon, and by Syme is quoted as one of the great improvements of

* See 'Medical Times and Gazette,' May 15, 1853.

† See page 28.

modern surgery ; the second is the only certain means we have of diagnosing the condition of the Eustachian tube, and its permeability.

None of your readers will suppose that Thomas Hood shared in the satire conveyed by the words he put into the mouth of the quack vendor of ear-trumpets in his "Tale of a Trumpet!" When he speaks from his own mouth, what says he of the advocate of removing diseased tonsils and of catheterism of the Eustachian passages?

" In short, she was twice as deaf as deaf Burke,
Or all the deafness in Yearsley's work,
Who, *in spite of his skill in hardness of hearing,*
Boreing, blasting, and pioneering,
To give the dunny organ a clearing,
Could never have cured Dame Eleanor Spearing."

In thus naming me as a most successful practitioner in my specialty I can well afford to share with others in the hilarity excited by reading Mr Toynbee's quotation of the poet's witty sallies. But why not have finished the quotation, which runs thus :

" Why, I knew a deaf Welshman who came from Glamorgan
On purpose to try a surgical spell,
And paid a guinea, and might as well
Have call'd a monkey into his organ !
For the aurist only took a mug,
And *poured in his ear* some acoustical drug,
That instead of curing him deafen'd him rather,
As Hamlet's uncle served Hamlet's father
That's the way with your surgical gentry ;
And happy your luck
If you don't get stuck
Through your liver and lights at a royal entry,
Because you never answer'd the sentry ! "

Yes, herein lies the difference between Mr Toynbee and myself. He treats deafness through the meatus.* I treat it through the mucous membrane of the throat and Eustachian tube, which latter Mr Toynbee, by another untenable theory, would fain close against us for ever.

And now I take my leave of Mr Toynbee, willing to resume the calm discussion of scientific questions, but not to indulge in personalities.

15 Savile row

I am, &c., JAMES YEARSLEY.

* Acoustic drops *in* the ear, endless blistering *behind* the ear, and the administration of mercury so pernicious to the patient, will not cure deafness, which as I have shown in my work, "Deafness Practically Illustrated," almost always arises from a morbid condition of the mucous membrane of the throat, of the Eustachian tube, and of the tympanum.

APPENDIX.

(Reprinted from the 'Medical Circular,' Jan. 6, 1858, page 9.)

THE ARTIFICIAL TYMPANUM.

[We readily comply with the wish of Mr Yearsley to reprint from the 'Medical Times and Gazette' the following correspondence, that our readers may be enabled to judge of the value of the statements that have emanated from Mr Toynbee. In the controversy, just ended, he has been clearly convicted of pirating an important discovery made by Mr Yearsley, and of misrepresenting the facts appertaining to a valuable method of practice. We do not remember to have read a more damaging correspondence.—ED. MED. CIRCULAR.]

CORRESPONDENCE.

TO THE EDITOR OF THE 'MEDICAL TIMES AND GAZETTE.'

SIR,—In your Journal, at page 614, my treatment is thus decried by Mr Toynbee. He says: "If Mr Yearsley desires it, I will give him formally the name of a Physician who consulted me with symptoms of inflammation of the dura mater, from having the cotton wool pushed into the meatus by Mr Yearsley's own hands." In my reply, at page 641, I contented myself with a simple denial of this bold assertion, and a promise to prove it untrue. Now to my proof.

To JOSEPH TOYNBEE, Esq.

SIR,—As I have never seen any accident or injury to my patients from the introduction of the wetted cotton, after many years' experience, I will thank you, agreeably to your offer in the 'Medical Times and Gazette' of this week, to give me the name of the Physician who you say consulted you, "with symptoms of inflammation of the dura mater, from having the cotton wool pushed into the meatus by Mr Yearsley's own hands."

I am, Sir, your obedient servant,

15 Savile row, Dec. 14, 1857.

JAMES YEARSLEY.

Mr Toynbee presents his compliments to Mr Yearsley; and the physician's name is Dr ——,* who wrote, Mr Toynbee believes, on

18 Savile row, Dec. 15th.

* The physician referred to is of high distinction, and the author of a very celebrated work.

To Doctor ——.

MY DEAR DOCTOR,—I am accused by Mr Toynbee of having produced symptoms of inflammation of the dura mater, by introducing the wetted cotton into your ear, and thus endangering your life. Now, I am myself quite sure that this is a most unwarrantable exaggeration of the facts of the case, and I fully rely on your relieving me of such an imputation, and my simple, harmless remedy, of such serious results. After fifteen years' extensive use of it, I have never seen it do harm, though occasionally a slight irritation, as stated in my pamphlet,* attends its first adoption.

If I recollect rightly, you suffered this irritation, but never to any serious degree, nor sufficient to confine you to your chamber; and I believe after it had passed off we again introduced the cotton with success as regarded the otorrhœa which annoyed you.

I am, my dear Sir, most truly yours,

15 Savile row, Dec. 17, 1857.

JAMES YEARSLEY.

December 22nd, 1857.

MY DEAR YEARSLEY,—A few days before I left London at the time to which you refer. I had a visit from an old medical friend, and when he found me almost deaf in both ears, and also that I had lost all hope of recovery, he most earnestly advised me to consult Mr Toynbee before I returned to ——. I promised to do so, and more to please my friend than from any hope of benefit, I called once—and only once—on that individual. He examined me most minutely, and I answered the many questions he put to me. I may have told him that I had tried the cotton plug, and also that I had been obliged to give it up on account of the increase of pain, but to the best of my recollection I did not mention your name, and most certainly I did not say one word about symptoms of inflammation of the dura mater, because at that time I had not the slightest fear of any such result, neither had I the slightest fear that my life was in danger. I am quite sure that I did not say so to Mr Toynbee, and if he says that I did I can only consider it as a sad proof of the length to which some medical men are willing to go when they wish to injure a successful rival in their medical *trade*. Please to let me know when and to whom it was that Mr Toynbee has brought me forward as an evil witness against one from whom I have received so much kindness, and to whom I feel the greatest gratitude for benefits received.

Believe me, your sincere friend,

—.

I make no comment, but leave your readers to draw their own conclusions from the foregoing correspondence.

I am, &c.,

15 Savile row, Dec. 29, 1857.

JAMES YEARSLEY.

The statement of Mr Toynbee with respect to the injury done to a physician by the introduction of the wetted cotton, having been so signally refuted by the physician himself (see 'Medical Times,' page 21, and reprinted above), I have been led to make further, inquiries as to the truthfulness of other statements in our recent

* On the Artificial Tympanum—a new Mode of Treating Deafness, when attended by Perforation of the Membrana Tympani—Churchill, New Burlington-street.

controversy, and knowing that a young Dutch surgeon, Herr Campbell, who has been recently attending my practice, had also attended the practice of Mr Harvey, I inquired of him if he had seen the cotton remedy applied by that gentleman, he replied in the affirmative, and that Mr Harvey had entirely adopted it, to the exclusion of the vulcanized membrane. This, with other facts, led me to seek further information from Mr Harvey himself, from whom I have received the following very gratifying communication.

I may state also that Herr Campbell, who had seen the practice of Mr Toynbee for many months, had never seen the vulcanized membrane worn by a patient continuously—inevitably the irritation it produced was too great to bear.

2 Soho square, January 2, 1858.

MY DEAR SIR,—I have much pleasure in replying to your questions. Herr Campbell attended my practice upwards of six months, during which period he has seen me introduce the wetted cotton for perforate Membrana Tympani, *as you direct*, in more than a hundred cases, with the greatest success and comfort to the patients, relieving an imperfect hearing as by magic. I have abandoned the vulcanized membrane with the wire stem for some years, in consequence of the irritation it produced, in favour of the cotton, which is more cleanly and more easily applied, less expensive, and less troublesome to the patient, I deny the possibility of the membrane closing the aperture without the aid of a second person, and when so closed, it is useless. I have tried both expedients in the same individuals, the cotton on one side, the membrane on the other, and have found it necessary to substitute the cotton. My opinion is that the modus operandi of the cotton is that it supports the ossicula, and that it should not cover the aperture entirely, nor does the button and gutta percha stem—a slight reflection will decide this point. As to the *suum cuique*, after no little investigation on this head, I conclude the discovery belongs to yourself, and to no one else—the profession and the public are much indebted to you for it.

Most faithfully yours.

James Yearsley, Esq.

W. HARVEY.

NOTE OF INQUIRY ADDRESSED TO PATIENTS,
AND THEIR REPLIES.

DEAR SIR,—Will you kindly say, whether in applying the cotton remedy you still find it necessary to adhere to my plan of placing it at the end of the passage of the ear on one side so as to preserve an opening down to the tympanum, or whether you cover the perforation entirely? Yours faithfully, JAMES YEARSLEY.

15 Savile row, Nov. 30th, 1857.

MY DEAR SIR,—In reply to your note received this morning I must inform you that I still continue the remedy I learnt from you, of applying the cotton to the end of the passage of the ear, and on one side only. Were I to cover the passage entirely, I should be even more deaf than I naturally am. I gave your address to-day to a lady who required it for a friend, as I always am glad that others should experience the benefits I have done.

The benefit I have myself experienced is more than I can say, and I shall ever feel grateful for the blessing you have been, through God's mercy, the means of bestowing. I remain, &c., G. E. B.

MY DEAR MR YEARSLEY,—I received yours this morning, and hasten to comply with your wishes. If I do not introduce the cotton down the passage of my ear, and place it on one side I find it to be worse than useless, as it decreases instead of increasing the degree of hearing. In order to be as correct as possible in my observations I have just applied it, and found as I have stated. With best wishes I remain, B. C.

SIR,—In reply to yours of yesterday I beg to state I still continue to apply the cotton application as at first applied by you at the end of the passage, but on one side, so as to preserve an opening to the bottom of the ear; in placing the cotton it seems to lift or support some delicate part of the interior of the ear, and by so doing the sound seems to pass on in its ordinary channels, &c. &c. F. A.

DEAR SIR,—According to your request I beg to inform you that I still adhere to your plan of applying cotton-wool to my ear, and which I find to have the desired effect, by placing it on one side only, so as "to preserve an opening down to the tympanum." F. P.

DEAR SIR,—I have used the artificial tympanum of cotton-wool these eight years, and have derived the greatest benefit from it. I do not cover the external part of the drum, but I place it sideways towards the back of the ear, leaving a small opening. Words would be wholly inadequate to express my gratitude for the great kindness and trouble you have taken with me. I remain, &c. H. H.

MEDICAL TESTIMONY.

A note from a highly respectable physician, printed at page 110, and testifying to the extraordinary efficacy of the New Mode of Treating Deafness described by Mr Yearsley, will be read with interest by the Profession.

We have ourselves seen the remedy applied by Mr Yearsley in several cases of apparently incurable deafness, and in some of those cases the effect produced

appeared to be almost miraculous. This happy discovery establishes for our Profession another claim to public gratitude and respect.—Leading Article of 'The Lancet,' July 22, 1848.

LANCET, PAGE 110.—TO THE EDITOR OF THE LANCET.

SIR,—Allow me, through the medium of your Journal, to express my deep obligation to Mr Yearsley for the successful application of his important discovery in the person of my own son, who, in consequence of his visit to that gentleman this morning, is enabled to enjoy, without effort, the conversation of his friends,—an advantage from which he has been debarred for years.

I am, Sir, yours faithfully,

CHARLES JAMES FOX, M.D.

30, New Broad street, City, July 18, 1848.

LANCET, PAGE 165.

SIR,—I feel very great pleasure in bearing my testimony to the value of Mr Yearsley's important discovery in the treatment of Deafness from perforation of the memb. tympani a discovery which I consider in importance second to none which has been brought before the Profession for many years.

I am, Sir, your obedient servant,

THOMAS BARRETT,

Bath, July, 1848.

Surgeon to the Bath Ear and Eye Infirmary.

TO JAMES YEARSLEY, ESQ.

DEAR SIR,—Having witnessed with the highest satisfaction and delight the happy and most surprising result of your operation upon one of my patients at the Eye and Ear Infirmary, who laboured under deafness from perforation of the drum of the ear, I beg to express to you my warmest thanks, and at the same time a sincere hope that you will gratify the Profession at large in this town by a public exhibition of this most simple and beautiful application of the art of surgery.

I have the honour to remain, dear Sir, your most obedient servant,

JOHN EDWARDS, M.D.,

One of the Surgeons to the Liverpool Eye and Ear Infirmary.

Liverpool, 153 Duke street, Sept. 13, 1849.

Extract from a Letter from Dr Noggerath, of Brussels, specially engaged in the Treatment of Diseases of the Eye and Ear, to James Yearsley, Esq.

"I have read with the highest interest an account of your valuable discovery of the *artificial tympanum*. I had formerly treated the son of my friend, Dr Alloway, who has been lately under your care, and am delighted to see the immense benefit he has derived from your method of treatment. I have succeeded well in one case but failed in others, probably, in time, my failures will be less frequent. I have read your Treatise, 'Deafness Practically Illustrated,' with the utmost satisfaction, finding capital practical remarks everywhere, much more so than in our German and French very scientific, but unpractical works."

Bruxelles, 28 Rue de la Paille, Sept. 14, 1849.

Extracts from a Letter from Wm. Harvey, Esq., F.R.C.S., Surgeon to the Royal Dispensary for Diseases of the Ear, &c.

In a letter to Mr Yearsley, Mr Harvey states that in a period of six months he has introduced the wetted cotton as directed, "in more than a hundred cases with the greatest success and comfort to the patients, relieving an imperfect hearing as by magic." He adds, "As to the suum cuique, after no little investigation on this head I conclude the discovery belongs to yourself and to no one else—the Profession and the public are much indebted to you for it."

Very faithfully yours,

WM. HARVEY.

Jas. Yearsley, Esq.

Extract from Wilde's Aural Surgery, page 308.

To Mr Yearsley we are indebted for making the discovery of the wetted cotton remedy known. The subject is one that has lately engaged, and very justly, much attention; and I have recently verified in numerous cases the opinion which I have on a former occasion expressed of its value.